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nwIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Dong et al.

U.S. Serial No.: 09/252,828 Examiner: L. Cook

Filing Date : February 19, 1999 Group Art Unit: 1641

: RECOMBINANT BIOLOGICALLY ACTIVE HUMAN ZONA PELLUCIDA PROTEIN 3 (Hzp3) TO TEST MALE FERTILITY

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June 17, 2002

Honorable Assistant Commissioner for Patents
 Washington, D.C. 20231

Sir:

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INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. § 1.56, applicants would like to direct the Examiner's attention to the following references which are listed on Form PTO-1449 (Exhibit A) and are attached hereto as Exhibits 1 through 16, respectively:

1. Bercegeay, S. et al. Composition of Human Zona Pellucida as Revealed by SDS-PAGE After Silver Staining. Molecular Reproduction and Development 41:355-359 (1995)
2. Bleil, Jeffrey D. et al. Sperm-Egg Interactions in the Mouse: Sequence of Events and Induction of the Acrosome

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Reaction by a Zone Pellucida Glycoprotein. Developmental Biology 95.317-324 (1988)

3. Bleil, Jeffrey D. et al. Identification of a Secondary Sperm Receptor in the Mouse Egg Zona Pellucida: Role in Maintenance of Binding of Acrosome-Reacted Sperm to Eggs. Developmental Biology 128.376-385 (1988)
4. Clark, Gary F. et al. New Concepts in Human Sperm-Zona Pellucida Interaction. Human Reproduction Volume 10 Supplement 1 (1995)
5. Duin, Marcel Van et al. Cloning and Characterization of the Human Sperm Receptor Ligand ZP3: Evidence for a Second Polymorphic Allele with a Different Frequency in the Caucasian and Japanese Populations. Genomics 14, 1064-1070 (1992)
6. Duin, Marcel Van et al. Recombinant Human Zona Pellucida Protein ZP3 Produced by Chinese Hamster Ovary Cells Induces the Human Sperm Acrosome Reaction and Promotes Sperm-Egg Fusion. Biology of Reproduction 51,607-617 (1994)
7. Greve, Jeffrey M. et al. Biosynthesis of the Major Zone Pellucida Glycoprotein Secreted by Oocytes during Mammalian Oogenesis. Cell. Vol. 31.749-759 December 1982

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8. Gupta, S.K. et al. Immunoreactivity with Native Zona Pellucida of Antibodies against a 19 Amino Acid Synthetic Peptide Corresponding to Human ZP3. Journal of Reproductive Immunology 27 (1994) 241-247
9. Gupta, S.K. et al. Localization of Epitopes for Monoclonal Antibodies at the N-Terminus of the Porcine Zone Pellucida Glycoprotein pZPC. Molecular Reproduction and Development 42:220-225 (1995)
10. Harris, Jeffrey D. et al. Cloning and Characterization of Zona Pellucida Genes and cDNAs from a Variety of Mammalian Species: The ZPA, ZPB and ZPC Gene Families. The Journal of Sequencing and Mapping, Vol.4, pp. 361-393 (1994)
11. Kinloch, Roes A. et al. Embryonal Carcinoma Cells Transfected with ZP3 Genes Differentially Glycosylate Similar Polypeptides and Secrete Active Mouse Sperm Receptor. Rockefeller University Press, 0021-9525/91/11/655/10 (1991)
12. Kipersztok, Simon et al. POM-ZP3, a Bipartite Transcript Derived from Human ZP3 and a POM121 Homologue. Genomics 25, 354-359 (1995)
13. Litscher, Eveline S. et al. Recombinant Hamster Sperm Receptors that Exhibit Species-Specific Binding to Sperm. Zygote 4 (August), pp229-236 (1996)

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14. Liu, Chengyu et al. Zona Pellucida Glycoprotein mZP3 Bioactivity is not Dependent on the Extent of Glycosylation of its Polypeptide or on Sulfation and Sialylation of its Oligosaccharides. Journal of Cell Science 110.745-752 (1997)
15. Oehninger, Sergio et al. Use of a Specific Zona Pellucida (ZP) Protein 3 Antiserum as a Clinical Marker for Human ZP Integrity and Function. Fertility and Sterility Vol. 65 No. 1, January 1996
16. Vazquez, Monica H. et al. Interaction of Mouse Sperm with Purified Sperm Receptors Covalently Linked to Silica Beads. Journal of Cell Science 92, 713-722 (1989)

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

The required fee for an Information Disclosure Statement (§1.97(c)) is One Hundred Eighty Dollars (\$180.00). Enclosed

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is a check for this amount. If any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 19-0741.

Respectfully submitted,

Date: June 17, 2002



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